

CORNELL UNIVERSITY OFFICIAL PUBLICATION

Volume XIX

Number 16

Announcement of the New York State Veterinary College 1928-29

Ithaca, New York
Published by the University
May 1, 1928

THE UNIVERSITY CALENDAR FOR 1928-29

Observed by all the departments of the University at Ithaca.

1928		FIRST TERM
Sept. 14,	<i>Friday,</i>	Entrance examinations begin.
Sept. 24,	<i>Monday,</i>	{ Registration and assignment of new students.
Sept. 25,	<i>Tuesday,</i>	
Sept. 25,	<i>Tuesday,</i>	{ Registration and assignment of old students.
Sept. 26,	<i>Wednesday,</i>	
Sept. 27,	<i>Thursday,</i>	Instruction begins at 8 A. M.
Oct. 19,	<i>Friday,</i>	Last day for payment of tuition for the first term.
Nov. 28,	<i>Wednesday,</i>	Instruction ends at 6 P. M. { Thanksgiving
Dec. 3,	<i>Monday,</i>	Instruction resumed at 8 A. M. { ing Recess
Dec. 22,	<i>Saturday,</i>	Instruction ends at 1 P. M. { Christmas
1929		
Jan. 7,	<i>Monday,</i>	Instruction resumed, 8 A. M. { Recess
Jan. 11,	<i>Friday,</i>	Founder's Day.
Jan. 26,	<i>Saturday,</i>	Instruction ends.
Jan. 28,	<i>Monday,</i>	Term examinations begin.
Feb. 6,	<i>Wednesday,</i>	Term ends.
Feb. 7,	<i>Thursday,</i>	A holiday.
		SECOND TERM
Feb. 8,	<i>Friday,</i>	Registration of all students.
Feb. 11,	<i>Monday,</i>	Instruction begins at 8 A. M.
Mar. 4,	<i>Monday,</i>	Last day for payment of tuition for the second term.
Mar. 30,	<i>Saturday,</i>	Instruction ends at 1 P. M. { Spring
April 8,	<i>Monday,</i>	Instruction resumed, 8 A. M. { Recess
May 25,	<i>Saturday,</i>	Spring Day: a holiday.
June 3,	<i>Monday,</i>	Term examinations begin.
June 11,	<i>Tuesday,</i>	End of term examinations.
June 17,	<i>Monday,</i>	COMMENCEMENT.

NEW YORK STATE VETERINARY COLLEGE

FACULTY

LIVINGSTON FARRAND, A.B., M.D., L.H.D., LL.D., President of the University.
VERANUS ALVA MOORE, M.D., V.M.D., D.Sc., Professor of Comparative Pathology, Bacteriology, and Meat Inspection; and Dean of the College.
SIMON HENRY GAGE, B.S., Professor of Histology, Emeritus.
WALTER LONG WILLIAMS, Professor of Obstetrics, and Research Professor in the Diseases of Breeding Cattle, Emeritus.
PIERRE AUGUSTINE FISH, D.Sc., D.V.M., Professor of Veterinary Physiology.
GRANT SHERMAN HOPKINS, D.Sc., D.V.M., Professor of Veterinary Anatomy and Anatomical Methods.
DENNIE HAMMOND UDALL, B.S.A., D.V.M., Professor of Veterinary Medicine and Hygiene.
HOWARD JAY MILKS, D.V.M., Professor of Therapeutics and Small Animal Clinic.
JAMES NATHAN FROST, D.V.M., Professor of Veterinary Surgery.
RAYMOND RUSSELL BIRCH, Ph.D., D.V.M., Superintendent of the Veterinary Experiment Station.
WILLIAM ARTHUR HAGAN, M.S., D.V.M., Professor of Bacteriology.
EARL SUNDERVILLE, D.V.M., Assistant Professor of Veterinary Anatomy, and Secretary of the Faculty.
CHARLES ERNEST HAYDEN, A.B., D.V.M., Assistant Professor of Veterinary Physiology.
HENRY ASMUS, Assistant Professor of Horseshoeing.
JAMES WILLIAM BENNER, M.S., D.V.M., Assistant Professor of Special Research in Animal Diseases.
CHARLES MILTON CARPENTER, Ph.D., D.V.M., Assistant Professor in Diagnosis and Parasitology.
HERBERT LESTER GILMAN, M.S., Ph.D., D.V.M., Assistant Professor of Research.
HADLEY CARRUTHERS STEPHENSON, B.S., D.V.M., Assistant Professor of Materia Medica.
MYRON GUSTIN FINCHER, M.S., D.V.M., Assistant Professor of Medicine and Obstetrics.
JOHN M. HENDRICKSON, M.S., D.V.M., Assistant Professor of Poultry Research.
EARL LOUIS BRUNETT, D.V.M., Assistant Professor in Poultry Diseases.
PETER OLAFSON, D.V.M., Assistant Professor of Pathology.
WALTER JOSEPH GIBBONS, D.V.M., Instructor in Medicine and Obstetrics.
JULIUS MAURER, D.V.M., Instructor in Surgery.
ARTHUR TRAYFORD, D.V.M., Instructor in Poultry Investigation.
ALEXANDER ZEISSIG, D.V.M., Instructor in Pathology and Bacteriology.
JAMES DE SETT BENNEHOFF, B.S., M.S., D.V.M., Assistant in Materia Medica.
WILLIAM CASLICK, D.V.M., Assistant in Poultry Investigation.
CHARLES JONAS PARSHALL, Assistant in Diagnosis.
NORMA F. ROSE, Technician.
WAYNE ARTHUR KELLY, Student Assistant in Pathology.
JOHN PIERCE MCINTOSH, Student Assistant in Anatomy.
JESSE SAMPSON, B.S., Student Assistant in Physiology.
ROLLINS ADAMS EMERSON, B.Sc., D.Sc., Dean of the Graduate School.
HENRY HIRAM WING, M.S. in Agr., Professor of Animal Husbandry.
ELMER SETH SAVAGE, Ph.D., Professor of Animal Husbandry.
MERRITT WESLEY HARPER, B.S., M.S., Professor of Animal Husbandry.
BENJAMIN FREEMAN KINGSBURY, Ph.D., M.D., Professor of Histology and Embryology.
HOWARD BERNHARDT ADELMANN, A.M., Instructor in Histology and Embryology.
WILLIAM MITCHELL ROGERS, B.S., Instructor in Histology and Embryology.
HUGH R. MOUAT, Student Assistant in Histology and Embryology.
KARL MCKAY WIEGAND, Ph.D., Professor of Botany.

WALTER CONRAD MUENSCHER, Ph.D., Assistant Professor of Botany.
 HUGH CHARLES TROY, B.S. in Agr., Professor of Dairy Industry.
 THOMAS JOSEPH MCINERNEY, M.S. in Agr., Assistant Professor of Dairy Industry.
 BENJAMIN PERCY YOUNG, Ph.D., Assistant Professor of Zoology.
 LOUIS MUNROE DENNIS, D.Sc., Professor of Inorganic Chemistry.
 ARTHUR WESLEY BROWNE, Ph.D., Professor of Inorganic Chemistry.
 ASA EMANUEL MCKINNEY, Ph.D., Instructor in Inorganic Chemistry.
 RALPH THOMAS KLINE CORNWELL, Ph.D., Instructor in Organic Chemistry.

THE STATE COLLEGE COUNCIL

President FARRAND, *Chairman*: Trustees THOMAS B. WILSON, FRANK H. MILLER, J. DUPRATT WHITE, GEORGE R. VANNAMEE, HORACE WHITE, E. R. EASTMAN, BERNE A. PYRKE, FRANK P. GRAVES, WILLIAM F. PRATT, JARED T. NEWMAN, and FRANK E. GANNETT; Dean A. R. MANN, Dean VERANUS A. MOORE, Director R. W. THATCHER, and Professors E. A. WHITE, R. S. HOSMER, PIERRE A. FISH, and FLORA ROSE.

NON-RESIDENT LECTURERS IN 1927-28

James Sullivan, *Department of Education, Albany, N. Y.*; Dr. W. E. Muldoon, *Peru, Ind.*; Dr. W. W. Williams, *Springfield, Mass.*; George W. Grim, *Milk Control Officer, Ardmore, Pa.*; H. W. Schoening, *U. S. Bureau of Animal Industry, Washington, D. C.*; Dr. R. L. Conklin, *MacDonald College, Quebec, Canada*; F. B. Morrison, *Agricultural Experiment Station, Geneva, N. Y.*; H. P. Hoskins, *Secretary of the A. V. M. A. Association, Detroit, Mich.*

DIRECTORY OF THE COLLEGE

Unless indicated otherwise, the office is in the main building of the Veterinary College.

President of the University, Morrill Hall.
 Dean of the Veterinary College, Dr. Moore, first floor, south wing.
 Asmus, Henry, Assistant Professor, Farriery Building.
 Bennehoff, J. D., Assistant, Small Animal Building.
 Benner, J. W., Assistant Professor, Experiment Station Farm.
 Birch, R. R., Professor, Room 1, first floor southwest.
 Brunett, E. L., Instructor, third floor northeast.
 Carpenter, C. M., Assistant Professor, first floor, south wing.
 Caslick, William, Assistant, third floor northeast.
 Fincher, M. G., Assistant Professor, Medical Building.
 Fish, P. A., Professor, Room 4, first floor northeast.
 Frost, J. N., Professor, Room 2, first floor southeast.
 Gibbons, W. J., Instructor, Medical Building.
 Gilman, H. L., Assistant Professor, second floor south.
 Hagan, W. A., Professor, third floor northwest.
 Hayden, C. E., Assistant Professor, Room 3, first floor northwest.
 Hopkins, G. S., Professor, Room 12, second floor northeast.
 Maurer, Julius, Instructor, Room 2, first floor southeast.
 Milks, H. J., Professor, Small Animal Building.
 Moore, V. A., Professor, Room 13, third floor southwest.
 Olafson, P., Assistant Professor, third floor southeast.
 Rose, Norma F., Technician, Room 18, third floor.
 Stephenson, H. C., Assistant Professor, Small Animal Building.
 Sunderville, E., Assistant Professor, Room 3, first floor northwest.
 Udall, D. H., Professor, Medical Building.
 Zeissig, A., Instructor, third floor northwest.

Clerk of the College, H. H. Haight, first floor, south wing.
 Librarian, Miss E. C. Williams, Room 9, second floor southeast.
 Stenographer and Secretary to the Director, Lillian M. Washburn, south wing.
 Stenographer and Clerk, M. L. Boyle, Clinical Buildings.
 Stenographer and Clerk, Beth B. Derrick, first floor southwest.
 Machinist, Archie Wilson, basement.

Groom, W. C. Selover, Cottage east of Main Building.
Groom, George Willis, Medical Building.
Groom, George F. Schneider, Small Animal Building.
Assistant Groom, C. A. Sutton.
Teamster, Henry Fatula.

THE FOUNDATION OF THE COLLEGE

The New York State Veterinary College was established by act of the State Legislature in 1894: "There is hereby established a State Veterinary College at Cornell University," Laws of New York, 1894, p. 307. By action of the Board of Trustees of Cornell University, June 10, 1894, the location of the College upon the University campus was authorized. It was further enacted that while the University does not undertake any financial responsibility for the buildings, equipment, or maintenance of the College, it does consent to furnish instruction upon such subjects as are or shall be in its curriculum, upon such terms as may be deemed equitable.

By further acts of the Legislature provision was made for the buildings, equipment, and maintenance of the College, and finally, in 1897, by "An act to provide for the administration of the State Veterinary College, established by Chapter 153 of the laws of 1894," the Trustees of Cornell University were intrusted with its administration.

OBJECTS OF THE INSTITUTION

As stated in the act to provide for the administration of the State Veterinary College: "The State Veterinary College, established by Chapter 153 of the laws of 1894, shall be known as the New York State Veterinary College. The object of said Veterinary College shall be: To control investigations as to the nature, prevention, and cure of all diseases of animals, including such as are communicable to man and such as cause epizootics among live stock; to investigate the economic questions which will contribute to the more profitable breeding, rearing, and utilization of animals; to produce reliable standard preparations of toxins, antitoxins, and other productions to be used in the diagnosis, prevention, and cure of diseases, and in the conducting of sanitary work by approved modern methods; and to give instruction in the normal structure and function of the animal body, in the pathology, prevention, and treatment of animal diseases, and in all matters pertaining to sanitary science as applied to live stock and correlatively to the human family."

The New York State Veterinary College was therefore founded to raise the standards of veterinary investigation and instruction to the level of the most recent advances in biology and medicine. According to the thirteenth census of the United States (1925), the number of farm animals in the State, exclusive of poultry and pet animals, was 3,146,000 of the value of \$181,834,000. This gives some idea of the great financial interest at stake in the matter of live stock. The latest census report for 1925 gives the value of the live stock of the United States on farms exclusive of poultry and pet animals at

\$4,689,576,000. The value of poultry in New York State is \$13,409,000. Another consideration is that the normal, permanent fertilization of the soil is dependent upon the live stock kept, and that where there is a deficiency of animals, the productiveness of the land is steadily exhausted; therefore, the health and improvement of animals and the fostering of animal industry lie at the very foundation of our national wealth. Another and no less potent argument for the higher standard of veterinary education is its influence on the health of the human race. With a long list of communicable diseases which are common to man and beast, it is to the last degree important that measures for the extinction of such contagion in our live stock should receive the best attention of the most highly trained experts.

To justify the liberality of the State in creating this seat of learning, it is the aim of the College to train thoroughly a class of veterinarians for dealing with all diseases and defects that depreciate the value of our live stock, and with the causes that give rise to them. It further aims, as far as it has the means and opportunity, to maintain a center of investigation looking toward discoveries in the nature of diseases, in therapeutics, and in the immunization of animals from contagion; and toward the production of biological products to be employed in diagnosis, treatment, and immunization. So much has been discovered recently in these directions and present knowledge points so unmistakably to coming discoveries, that to neglect this field at the present time would be very unfortunate. Apart from discovery, the mere production of reliable diagnostic and therapeutic biological products is of great economic importance. Furthermore, it is the purpose of the College to be of as much assistance as possible to the practitioners of veterinary medicine.

The combination in one institution of educational facilities with scientific investigation, and the production of vaccines and serums to be employed in modern medical methods, are features that insure the best work in all departments, and the most exceptional advantages for the diligent student.

SITUATION

The New York State Veterinary College is situated at Ithaca, a city of 17,000 population, at the head of Cayuga Lake, 263 miles from New York City, on the Lehigh Valley and Lackawanna Railroads. The college buildings are near the center of the campus of Cornell University. The main line of the Ithaca street railway system crosses the campus on East Avenue, almost immediately in front of the college.

BUILDINGS

JAMES LAW HALL (THE MAIN BUILDING), 142 feet long by 42 feet wide and three stories high, overlooks East Avenue and an intervening park of 300 feet by 220 feet. The walls are of buff pressed brick, on a base of Gouverneur marble; window and door facings are of Indiana limestone and terra cotta ornamentations. On the first floor

are the museum and the offices of the professors of physiology and surgery, and of the superintendent of the Experiment Station. The second floor contains a lecture room, a laboratory of physiology and urine analysis, seminar room, and office of the professor of anatomy. On the third floor are the offices and the laboratories of pathology and bacteriology.

Connected with the main building and forming its north wing, is a structure 90 feet long by 40 feet wide and two stories high. Its floors are of impermeable cement. This wing contains the anatomical laboratories and the lecture room of anatomy, physiology and surgery. A similar wing projects from the south end of the main building. On the first floor are the Faculty room, Dean's office, business offices, a diagnosis laboratory and an amphitheater with seating capacity for 318. It is provided with a good moving picture machine and balopticon. On the second floor is the library with spacious reading rooms.

THE SMALL ANIMAL BUILDING is 70 feet long by 44 feet wide and three stories high. This building is fireproof, well lighted, and provided with modern plumbing. On the first floor are the waiting room, janitor's room, drug and instrument room, operating room with modern equipment, and general ward containing twenty-two kennels. The kennels are well lighted, roomy, well drained, and separated from each other by marble partitions. Besides these rooms there is a ward for infectious diseases which is entirely separated from the rest of the building. The second floor contains the offices, and private laboratories for the Department of Materia Medica and Small Animal Clinic, small wards for skin diseases, eye diseases, quarantine wards, and wards for cats, making a total number of forty-two kennels. On the third floor are the lecture room, museum, research laboratory, and students' laboratory for materia medica and pharmacy.

THE MEDICAL BUILDING is three stories high, and 160 feet long by 44 feet wide on the ground. The ground floor contains a clinic hall, drug room, physical examination room, elevator, office, wards for large animals, and a wagon-room for the ambulatory clinic. The first floor above, 100 feet long by 44 feet wide with a side extension for the lecture room, contains wards for patients, lecture room, museum room, photographic room, offices, and research and student laboratories. The third floor contains living rooms for the groom, the student assistants, and the internes, and a large laboratory. The attic contains vermin-proof grain bins, and a storage room for hay, and communicates with the wards by means of vertical shafts. The stalls are built of iron and quartered oak, with wide corridors for the accommodation of classes. The building is of modern construction; it is well lighted, fireproof, and heated throughout with steam; it has a modern system of plumbing and ventilation, and all animal wards are perfectly aired through large vertical shafts.

THE FARRIERY, 70 feet long by 44 feet wide and three stories high, is of the same type of construction as the medical building. On the

ground floor are an isolation ward, horse and cattle wards, and a demonstration hall. These form a part of the clinical plant of the College. The floor above is fully equipped for the teaching of horse-shoeing. It contains forges, shoeing stocks, laboratory desks, and other equipment equal to that of the leading continental schools. The third floor is used for classrooms and a museum.

THE SURGICAL WARD, 100 feet long by 31 feet wide, is furnished with box and other stalls, heating apparatus, baths, and all necessary appliances. The floor is of impermeable cement, and the ceilings of painted sheet steel. There is also a fodder room 20 feet by 30 feet.

THE OPERATING THEATER for the surgical clinic is at the south end of the patients' ward and is connected therewith. The building is well lighted and is provided with modern plumbing. There is a recovery room, in which the patients may recover from the effects of anaesthetics, connected with the operating table by an inclined plane, down which the patient may be conveyed. The clinic is well supplied with instruments and modern conveniences.

THE MORTUARY BUILDING has an impermeable floor, walls of enameled brick, and painted steel plate ceilings.

THE POST MORTEM BUILDING is behind the main building and is furnished with room for instruments, and with water, heater, etc. The lighting and equipment and the facilities for demonstration have received special attention.

A cottage for the groom completes the list of State buildings erected for the Veterinary College. The equipment has been made very complete for both educational uses and research.

For a more detailed account of the equipment and of the facilities for instruction see Departments, Methods, and Facilities, pages 17-27.

LIBRARIES AND MUSEUMS

The Veterinary College not only has a good special library of its own, the Roswell P. Flower Library, but it also enjoys the free use of the University Library of 750,000 volumes and over 2,000 current periodicals and transactions of societies. Its own museum, moreover, is supplemented by other University museums, among which, of particular value to the college, are those of vertebrate and invertebrate zoology (including entomology), agriculture, botany, and geology.

THE ROSWELL P. FLOWER LIBRARY

The late Roswell P. Flower of Watertown, former Governor of the State, laid the foundation for a thoroughly good working veterinary library by his gift of \$5,000 to the Veterinary College in 1897. Mrs. Flower, in 1900, gave the library an endowment of \$10,000, the income of which is used for the purchase of books. The collection of books and periodicals obtained with these funds has been considerably increased by donations from various persons and by purchases out of the income of the College, and the Flower Library now com-

prises about 7,272 volumes. It is generously supplemented by the loan of books and periodicals from the University Library.

The new library wing of James Law Hall, with spacious stack and reading-rooms, is open daily from 9 to 5. In the reading-room are the current numbers of the leading American and foreign veterinary and medical periodicals. Books bearing especially upon the work of laboratory courses, the catalogue, and books of general reference may also be consulted here. Books may be drawn by students from the library for home use under the same general rules that pertain to the University and Agricultural libraries; these libraries also are accessible to Veterinary students. The generosity of the Army Medical Library in Washington and of the Academy of Medicine in New York, from which the Flower Library may borrow books for special research workers, enlarges still further the scope of the Flower Library, and opens to scientific workers in this field the main collections of medical literature in the country.

GENERAL LIBRARY FACILITIES

In the University Library there are more than 10,000 volumes, including bound periodicals and transactions, on veterinary and human medicine and the allied sciences. The library receives regularly more than 2,000 periodicals and journals of transactions, and many of them pertain directly to medicine and biology. Veterinary students have free access to the University Library and its reading rooms, which are open every day except Sunday from 8 a. m. till 10:45 p. m.

NON-RESIDENT LECTURERS

Practitioners and other persons working in the interest of veterinary medicine are invited to visit the College and lecture before the faculty and students. These lectures are arranged to take place as regularly as possible throughout the year. They widen the scope of the instruction and bring the student into closer touch with matters pertaining to practice, meat inspection, sanitation, etc.

ADMISSION

The entrance requirements of the New York State Veterinary College may be satisfied by either *A* or *B* as below:

A. By presentation of a Veterinary Student Certificate issued by the Education Department, Albany, New York.

The candidate wishing to satisfy entrance by this method should apply directly to the New York State Education Department, Albany, N. Y., for a Veterinary Student Certificate. He should send to that Department official evidence of his qualifications to meet the requirements stated by the Department for a Veterinary Student Certificate. Upon receipt of the Veterinary Student Certificate from Albany the candidate should file it, together with an application for admission to the Veterinary College, with the Registrar of Cornell University. A student who is a candidate for the Veterinary degree

must be entitled to a Veterinary Student Certificate, issued by the State Department of Education, before beginning his course. Prospective students are advised to avoid complications and delay by obtaining the Veterinary Student Certificate before entering the University.

B. By satisfying the Cornell University entrance requirements in 15 units, including English 3 units, a foreign language 3, History 1, Plane Geometry 1, Elementary Algebra 1, and electives 6.

The candidate may satisfy these requirements by presenting an acceptable high school or preparatory school certificate, or by passing examinations of the Regents of the University of the State of New York, or of the College Entrance Examination Board, or of Cornell University, or by a combination of any of these methods. The candidate should file his application and credentials with the Registrar of Cornell University at as early a date as possible. Blank forms and further information will be furnished by the Registrar upon request. A student satisfying entrance by this method must, before beginning his course, secure from the Education Department, as stated above, a Veterinary Student Certificate and file the same with the Registrar of Cornell University.

Students preparing to enter the Veterinary College are advised to take biology and physics among their electives in high school work.

RULES GOVERNING ADMISSION

Besides satisfying the entrance requirements, candidates for admission must comply with the following rules:

1. Every candidate for admission to an undergraduate course must deposit twenty-five dollars with the Treasurer. A check, draft, or order should be payable to Cornell University and should be sent to The Treasurer, Cornell University. The deposit must be made not later than June 1 if the candidate is to be admitted in September to the College of Arts and Sciences or the College of Architecture, and not later than August 1 if he is to be admitted in September to any of the other colleges. It must be made not later than January 1 if the candidate is to be admitted in February to any of the colleges.

(The winner of a New York State Tuition Scholarship in Cornell University may apply for admission to the University and make the required deposit of \$25 immediately after receiving formal notice of his appointment from the Commissioner of Education at Albany.)

If the candidate matriculates, the deposit will be credited to his account, \$10 for the matriculation fee and \$15 as a guaranty fund, which every undergraduate student is required to maintain and which is to be refunded upon his graduation or permanent withdrawal, less any indebtedness to the University.

If admission is denied a candidate who has complied with all these rules the deposit is refunded in full at any time.

A candidate may withdraw the application for admission, but a charge of \$10 is regularly made for accrued expenses unless the application is withdrawn and a refund of the deposit in full is claimed before the due date, which is June 1 in the College of Arts and Sciences and the College of Architecture and August 1 in the other colleges. If an application is not withdrawn until after the due date of the college concerned, but is withdrawn before August 31, the \$10 charged for accrued

expenses is deducted and \$15 of the deposit is refunded. No refund is made to an applicant who withdraws the application after August 31.

In the case of applications for admission in February, a withdrawal after January 1 incurs the regular charge of \$10, and no refund is made for withdrawal after January 31.

2. Every candidate for matriculation must submit to the Registrar a satisfactory certificate of vaccination against smallpox, not later than August 1 if he is to be admitted in September, or not later than January 1 if he is to be admitted in February. It will be accepted as satisfactory only if it certifies that within the last five years a successful vaccination has been performed or three unsuccessful attempts at vaccination have been made.

3. Every candidate for admission to an undergraduate course must file with his application at the Registrar's office either a certificate of good moral character or, if he has attended some other college or university without graduating from it, a certificate of honorable dismissal from it.

ADMISSION TO ADVANCED STANDING

Applicants for admission to advanced standing as members of the second, third, or fourth year class must present the necessary educational qualifications for admission to the first year class, and must pass satisfactory examinations in all the work for which they desire advanced credit, or offer satisfactory certificates of the completion of this work in other schools whose entrance requirements and courses of study are equivalent to those of this college. No person will be admitted to any advanced class except at the beginning of the college year in September.

Graduates of veterinary colleges whose requirements for graduation are not equal to those of the New York State Veterinary College may be admitted upon such terms as are fixed by the State Department of Education in Handbook No. 12. In this connection, attention is called to the legal requirements of academic and professional education for the practice of veterinary medicine in the State of New York. See page 9 and Appendix B.

ADMISSION TO GRADUATE STUDY

Graduates of this college or of other colleges may enter the Graduate School of Cornell University and pursue work in the Veterinary College and allied departments of the University. A prospective graduate student should consult the Announcement of the Graduate School and apply to the Dean of the Graduate School.

ADVANCED WORK AND RESEARCH

The Veterinary College, alone or in combination with other departments of the University, offers advanced students very great opportunities for study and investigation. Its situation gives it abundant and various material for research, and it has ample facilities for the prosecution of such work. It encourages graduate and advanced students to carry on independent investigations. Courses of study especially adapted to advanced work and research will be found among those listed on pages 17-27.

SEMINARIES

The several departments of the College hold seminars or special conferences for their advanced and graduate students. The seminary hears reports of the results of investigations and the progress of

knowledge in its particular field; discusses methods of advanced and independent work such as is expected of those who are preparing theses or prosecuting any special investigation; and hears the reports of the students on the progress of their work. By means of the seminary the student incidentally gains facility in public speaking and fits himself to take a creditable part in the meetings of veterinary or medical societies.

STUDY FOR PRACTITIONERS

The very rapid advance made during recent years in veterinary science and in facilities and methods for teaching it, as well as the advantage to be gained by studying a given subject under more than one teacher, make it highly desirable that busy practitioners should be enabled as far as possible to increase their personal knowledge by means of study at such times as they can leave their practices. The New York State Veterinary College wishes to supply this want so far as practicable and offers every facility at hand to accomplish this end.

Veterinarians who are legally authorized to practice at their places of residence will be admitted to any class in the college at any time and for such period as they may elect, without entrance examinations. They will be wholly free to elect any studies that are being regularly taught at the time, and will be granted all opportunities and facilities offered to regular students as long as these privileges do not interfere with the instruction of the regular students. No tuition will be required from licensed veterinarians practicing in the State of New York. Those taking laboratory courses will be required to pay fees to cover the cost of the material used. Every practicable facility will be offered for special study along desired lines. A study of pages 16-27 (Departments, Methods, and Facilities) will enable a practitioner to determine in advance precisely what work will be in progress at a given date.

This work is offered to veterinarians entirely for the benefit they may derive from increased knowledge in veterinary science and does not contemplate the granting of a degree, certificate, or other evidence of responsibility on the part of the College.

General inquiries in reference to this work should be addressed to the Dean, whereas questions relating to studies in the various departments may be addressed to the heads of the departments concerned.

A SEVEN-YEAR COURSE IN AGRICULTURE (B.S.) AND VETERINARY MEDICINE (D.V.M.)

A regular student may register in both the New York State College of Agriculture and the New York State Veterinary College provided (1) he has completed all specifically required courses up to that time, (2) has a credit of ninety hours none of which is in the Veterinary College, and (3) has the permission of both the faculties concerned. Such a student may be recommended for the degree of Bachelor of Science when he has (1) completed, besides the ninety hours already credited him, thirty hours, of which not less than twelve are for courses taught in the College of Agriculture, and has (2) fulfilled both the group and the agricultural elective requirements of the College of Agriculture. On the completion of the remaining three years, if he meets the requirements of the Veterinary College, he may receive the degree of Doctor of Veterinary Medicine.

REGISTRATION

Every student is required to register with the Registrar of the University at the beginning of each term. See the Calendar on page 2 for the exact day. After completing that registration, he must register on the same day with the Secretary of the Veterinary College, Dr. Sunderville, at Room 3, on the first floor of the main building of the College. After being admitted to the University no student is allowed to register after the close of the regular registration day except by special permission.

TUITION AND OTHER FEES

Tuition. For students not residents of the State of New York the tuition in the Veterinary College is two hundred dollars a year, payable \$110 at the beginning of the first term and \$90 at the beginning of the second term. Tuition is free to residents of the State of New York. The law governing the administration of the College provides that "no tuition fee shall be required of a student pursuing the regular veterinary course who for a year or more immediately preceding his admission to said veterinary college shall have been a resident of this State." A limited number of tuition scholarships are available for non-residents; see Scholarships, on page 14.

Students are advised to consult the General Circular of Information for the University's rules regarding the payment of tuition and other fees.

Laboratory Fees. Every person taking laboratory work is required to pay for the materials actually used. For the first year the laboratory fees will approximate \$52.50; for the second year, \$40; for the third year, \$41; for the fourth year, \$5.00. In some departments a rebate is given at the end of the academic year if there has not been much breakage or excessive use of materials.

A Matriculation Fee of \$10 is required of every student upon entrance into the University; this fee must be paid at the time of registration. A new undergraduate student who has made the required deposit of \$25 with the Treasurer need not make an additional payment of the matriculation fee, because the Treasurer will draw on the deposit for this fee.

An Infirmary Fee of \$5 a term is required, at the beginning of each term, of every student. In return for the Infirmary fee, any sick student is, on his physician's certificate, admitted to the Infirmary, and is given without further charge a bed in a ward, board and ordinary nursing, for a period not exceeding two weeks in any one academic year.

A Willard Straight Hall Membership Fee of \$4 a term is required, at the beginning of each term of every student. Its payment entitles the student to a share in the common privileges afforded by the operation of Willard Straight Hall, subject to regulations approved by the Board of Managers of the Hall. A fee of \$4 a term is required of all graduate students except those who are members of the instructing staff, for whom membership is optional. The use of the hall is restricted to those who have paid this fee.

A Physical Recreation Fee of \$2 a term is required, at the beginning of each term, of every male undergraduate student. Payment of this fee entitles the student to the use of the gymnasium and the university playgrounds, and to the use of a locker, together with the use of bathing facilities and towels, in the gymnasium, or in the New York State Drill Hall, or in the Schoellkopf Memorial Building.

A *Graduation Fee* is required, at least ten days before the degree is to be conferred, of every candidate for a degree. For a first or baccalaureate degree the fee is \$10; for an advanced degree it is \$20. The fee will be returned if the degree is not conferred.

Tuition and other fees become due when the student registers. The University allows twenty days of grace after the last registration day of each term. The last day of grace is generally printed on the registration coupon which the student is required to present at the Treasurer's office. Any student who fails to pay his tuition charges, other fees, and other indebtedness to the University, or who, if entitled to free tuition, fails to claim it at the Treasurer's office and to pay his fees and other indebtedness, within the prescribed period of grace, is thereby dropped from the University unless the Treasurer has granted him an extension of time to complete payment. For the conditions and terms of any such extension, see the General Circular of Information.

A tuition fee or other fee may be changed by the Trustees at any time without previous notice.

CHARGES FOR MINOR DELINQUENCIES

Every student is held personally responsible for any injury done by him to any of the University's property.

Assessments, charged to the student's account and payable at the Treasurer's office, are levied upon the student in certain circumstances, under the following rules of the University:

A student desiring to be reinstated after being dropped from the University for delinquency in scholarship or in conduct shall first pay a fee of \$25.

A matriculated student desiring to register after the close of registration day shall first pay a fee of \$5. [Students in the Graduate School are excepted.]

A student desiring to file his registration of studies after the date set by his college for filing the same shall first pay a fee of \$2.

A student desiring to take an examination or other test for the removal of a term condition (including the making up of a mark of "absent" or "incomplete") shall first pay a fee of \$2 for each examination or other test.

A student desiring to make an appointment for the required medical examination or conference after twenty days from the last registration day of the term shall first pay a fee of \$2.

For reasons satisfactory to the proper authority any of the above-mentioned assessments (except that levied for examination or other test to remove a condition) may be waived in any individual case if the student's failure to comply with the regulation was due to ill health or to other reason beyond his control. Application for such a waiver should be made to the Dean of the college enrolling the student or, in the case of the medical examination, to the chairman of the Faculty Committee on Health.

SCHOLARSHIPS AND PRIZES

The following scholarships and prizes are offered to students in the Veterinary College as incentives to earnest study:

University Undergraduate Scholarships. At a special examination held at the beginning of the fall term in each year, eighteen scholarships, continuing for two years and of an annual value of \$200 each, are open to competition by all members of the incoming freshman class of the University. For a statement of the provisions regulating the award and tenure of these scholarships, see the General Circular of Information.

University Scholarship for Graduates. One University Graduate Scholarship of the value of \$200 is offered annually to a graduate in veterinary medicine. This scholarship is open to graduates of all veterinary schools having requirements for graduation equivalent to those of this college. Applications may be

made by graduates or seniors in good standing and should be filed with the Dean of the Graduate School on or before March 15 of the academic year preceding the one for which application is made.

Tuition Scholarships. The trustees have authorized a limited number of scholarships, each of an annual value of \$200, the amount of the annual tuition, to be awarded each year by the Veterinary College. The scholarships are awarded to undergraduate students who are of sufficiently high promise or standing in the judgment of the faculty, who are not residents of New York State, and who have had, before entering, some college or university training. Each student holding a scholarship must maintain a standing satisfactory to the Veterinary Faculty.

The Horace K. White Prizes, established by Horace K. White of Syracuse, are awarded annually to meritorious students in the graduating class of the College. They consist of a prize of \$15 to the first in merit and a prize of \$10 to the second in merit.

The Hollingworth Honorarium for Research. An honorarium of \$50 in pathology and bacteriology established by Dr. W. G. Hollingworth of Utica is awarded annually to a member of the graduating class. The award is based upon the general standing of the student throughout his course and especially on his standing in pathology and bacteriology.

The Jane Miller Prize of \$50 in veterinary physiology is awarded to the student or students doing the best work in this subject. This prize is usually divided into a first prize of \$30 and a second prize of \$20 and awarded at the end of the junior year.

The James Gordon Bennett Prize of \$50 is offered to members of the graduating class. The award is based upon work in the clinics giving evidence of the ability of the recipient to handle diseased animals humanely. Special emphasis is laid upon the ability of the student to apply effectively local and general anaesthesia.

The Anne Besse Prize of \$50 in the principles and practice of veterinary medicine. This award is based upon work in the clinics giving evidence of ability in clinical diagnosis.

EXPENSES

Living expenses in Ithaca vary from \$8 to \$12 a week. Books, instruments, stationery, etc., cost about \$40 a year.

OPPORTUNITIES FOR SELF-HELP

In addition to occasional and irregular work at hourly compensation in the various departments, the following positions as student assistants are open to capable veterinary students in their senior year:

Anatomy	\$400 a year
Bacteriology and Pathology	\$400 a year
Physiology	\$400 a year

THE RULE GOVERNING STUDENT CONDUCT

The University's rule governing the conduct of students is this: "A student is expected to show both within and without the University unfailing respect for order, morality, personal honor, and the rights of others." The authority to administer this rule and to impose penalties for its violation is vested in the University Committee on Student Affairs. The rule is construed as applicable at all times, in all places, to all students of the University. A student may at any time be removed from the University if, in the opinion of the Committee on Student Affairs, his presence is not conducive to the University's best interests.

THE PRESCRIBED FOUR-YEAR COURSE

LEADING TO THE DEGREE OF DOCTOR OF VETERINARY
MEDICINE (D. V. M.)

REQUIREMENTS FOR GRADUATION

In order to receive the degree of Doctor of Veterinary Medicine (D.V.M.), candidates must satisfy all the entrance requirements (see page 9), must successfully pursue the courses named in the following Schedule of Studies, must have paid all due fees, and must have spent at least one year in residence.

The work of the college is arranged to begin late in September and to close in June. This academic year is divided into two terms. See the Calendar on page 2.

After the first year, a student remaining in the Veterinary college must pass ten hours each term, four of which must have a grade of 70 or better.

THE SCHEDULE OF STUDIES

In the following schedule, the figure in the first column after the name of the course is the number of the course and refers to a description on one of the following pages, 17-27; the figures in the second and third columns indicate the hours of credit given for the successful pursuit of the several courses in either term; and in the last column is the number of actual hours of work required for each course.

FIRST YEAR

<i>Subject</i>	<i>Course</i>	<i>Credit</i>	<i>Hours</i>
Chemistry.....	101	— 6	144
Botany.....	3	3 2	128
Anatomy.....	1	3 —	432
".....	2	1 —	
".....	3	3 —	
".....	4	— 5	
Histology.....	6	4 3	240
Physiology, Lectures.....	10	3 —	96
" Recitations.....	11	— 3	
Military Science and Tactics.....	1		96
Hygiene.....	—	1 1	32
Total of credit and hours of work...		18 20	1168

SECOND YEAR

<i>Subject</i>	<i>Course</i>	<i>Credit</i>	<i>Hours</i>
Zoology.....	1a	— 3	96
Anatomy.....	5	5 —	256
".....	6	— 1	
Physiology, Recitations.....	12	2 —	32
" Lectures.....	13	— 2	32
" Laboratory.....	14	2 —	80
Pharmacology.....	20	2 2	64
Materia Medica.....	21	2 1	120
General Surgery.....	30	— 4	112
General Pathology, Recitations.....	40	— 2	32
" " Laboratory.....	40a	— 2	80
General Bacteriology, Lectures.....	43	2 —	32
" " Laboratory....	43a	2 —	80
Physical Diagnosis.....	51	— 2	32
Military Science and Tactics.....	1	— —	96
Total of credit and hours of work...		17 19	1144

THIRD YEAR

<i>Subject</i>	<i>Course</i>	<i>Credit</i>		<i>Hours</i>
Animal Husbandry.....	I and 2	3	3	128
Embryology.....	9	—	2	56
Urine Analysis.....	15	—	1	40
Diseases of Small Animals.....	22	—	2	32
Small Animal Clinic.....	25	1	1	48
Surgical Exercises.....	31	1	—	48
Special Surgery.....	32	5	—	80
Consulting Clinic.....	34	1	1	48
Autopsies—By appointment.....	47	—	—	—
Special Pathology.....	41	2	—	32
“ “.....	41a	2	—	80
Pathogenic Bacteriology, Lectures...	49	—	2	32
“ “ Laboratory	49a	—	3	80
Parasites.....	44	2	—	32
“.....	44a	1	—	40
Medicine.....	50	2	3	80
Ophthalmology.....	55	—	1	16
Total of credit and hours of work...		20	19	872

FOURTH YEAR

<i>Subject</i>	<i>Course</i>	<i>Credit</i>		<i>Hours</i>
Milk Composition and Tests, Dairy.	1	—	3	72
Materia Medica.....	23	2	—	32
Small Animal Clinic.....	25	1	1	48
Surgical Clinic.....	33	2	2	96
Consulting Clinic.....	34	1	1	48
Jurisprudence.....	35	—	1	16
Infectious Diseases, Lectures.....	42	2	—	32
Poultry Diseases.....	46	—	2	32
Autopsies.....	47	—	1	24
Meat and Dairy Inspection.....	48	—	1	16
Medicine.....	50a	3	2	80
Horseshoeing.....	52	1	1	80
Ambulatory Clinic.....	53	2	2	80
Obstetrics.....	54	4	—	64
Veterinary Hygiene.....	56	—	1	16
Diseases of Small Animals.....	22a	—	1	16
Total of credit and hours of work...		18	19	752

DEPARTMENTS; FACILITIES; METHODS;
COURSES OF INSTRUCTION

In the following pages, the names of the departments, with summaries of their particular equipment, facilities, methods, and courses of instruction, are given approximately in the order in which the studies are pursued in the veterinary curriculum.

CHEMISTRY

*101. **Introductory Inorganic Chemistry.** Lectures. Repeated in the second term. Credit three hours.

Two sections: M W F 11; T Th S 11. *Main Lecture Room.* Professor BROWNE and Assistant Professor LAUBENGAYER.

Entrance credit in chemistry does not carry with it University credit in Courses 101 or 105. If a student entering the University from a preparatory school desires credit for these Courses, he must pass an examination set by the Department of Chemistry.

This examination is held in New York City and in Ithaca on the same day in September as the entrance examination. University credit in Courses 101 and 105 that is obtained by passing this examination does not carry with it entrance credit in Chemistry.

Examinations for those who were unavoidably absent from the final examinations in Courses 101 and 105 will be held at 2 p. m. on the day before instruction begins in the fall.

***105. Introductory Inorganic Chemistry.** Recitations and laboratory practice. Repeated in the second term. Credit three hours.

Recitations, one hour a week, to be arranged.

Laboratory sections: M F 2-4:30; T Th 2-4:30; W 2-4:30; S 8-10:30. Room 150. Professor BROWNE, Assistant Professor LAUBENGAYER, and assistants.

Chemistry 101 and 105 must be taken simultaneously unless permission is obtained by the student from the Dean of his college and from the Department of Chemistry to take either course alone. Laboratory fee, \$25.

375. Elementary Organic Chemistry. First term. Lectures and written reviews only, four hours credit; with laboratory, five to six hours credit. Students who are preparing for the study of medicine must take the entire six hours. Prerequisite, Chemistry 210 and 225 (or 205, 206, 220, and 221). Open to those who are taking course 220. Dr. BEACH and assistants.

Lectures and written reviews, Dr. BEACH. M W F S 12. *Baker, Main Lecture Room.*

Laboratory section and oral reviews, M W 2-4:30. *Baker 250.*

MICROSCOPY; HISTOLOGY; EMBRYOLOGY

Professors, B. F. KINGSBURY; Instructors, H. B. ADELMANN and W. M. ROGERS; Assistants, E. O. BUTCHER, JULIA B. ROTHERMEL, H. R. MOUAT, and F. W. S. SCUDDER.

This department offers instruction in the theory and use of the microscope and its accessories; in vertebrate histology, in vertebrate embryology, and in histologic and embryologic technique; and opportunity for research in all of these subjects. For all the courses the department is well supplied with the best modern apparatus.

The rooms for the use of this department are in the basement and second floors of Stimson Hall. They consist of a large general *laboratory*, a research laboratory, preparation room, and laboratories for the instructing staff, where also special demonstrations of difficult subjects are given to small groups of students.

In the courses outlined below, the student gains a practical knowledge of the normal structure of the tissues and organs of the animal body by the direct study of them in the laboratory. From time to time, the ability of the student to recognize the normal structure is tested by the identification of unlabelled preparations. The laboratory work is supplemented by recitations, reviews, and lectures covering the general aspects of the subject.

6. Microscopy and Histology. Throughout the year. Credit seven hours. Required of first year students. The exercises each week are as follows: First term, laboratory work M 2-4:30, W 2-4:30, lecture W 8, lecture or recitation M 8; second term, laboratory W 10-1, F 10-1, lecture Th 8. Mr. ROGERS and assistants.

Microscopy. The aim is to give a working knowledge of the theory and use of the microscope and its accessories, methods of mounting microscopical specimens, etc. Laboratory fee \$6 per term.

Histology. This includes the study of the fine anatomy of the animal body, and also fundamental methods of histologic investigation and demonstration.

9. Embryology. Third year, second term. Credit two hours. The exercises each week are as follows: Laboratory work M 11-1, lecture M 10. Professor KINGSBURY. A study of the development of the domestic animals (chiefly common fowl, pig, sheep, cow, horse), the fetal membranes and placenta, together with a general consideration of sex, inheritance, and the laws of development, maternal impressions, etc.

ANATOMY

Professor, G. S. HOPKINS; Assistant Professor, EARL SUNDERVILLE.

The instruction in anatomy is by lectures, recitations, and laboratory work, the last being by far the most important. The objects of the lectures are to present facts of general morphology as related to the horse and other domestic animals; to direct attention, as far as possible, to the correlation of structure and functions of the various organs of the body; and to emphasize the anatomical relations of those parts most subject to surgical operations. The main reliance, however, is placed upon the work done in the laboratory. Thorough, practical knowledge of anatomy can be acquired in no other way, and every student, before taking his final examination, will be required to dissect all parts of the horse or the ox, and such parts of other domestic animals as may prove most expedient.

The courses in anatomy extend over two years. The first year is devoted to the study of bones, joints, muscles, and certain viscera; the second year, to the vascular and nervous systems and to the organs of special senses.

In the study of osseous, muscular, digestive, and respiratory systems, the skeletons in the laboratory and the Auzoux models afford valuable assistance. In the museum there are accumulating series of specimens which illustrate, in a typical manner, some of the more important anatomical features of the various domestic animals.

1. **Comparative Osteology.** First year, first term. Credit three hours. Lectures, T 10. From September to February there will be five periods of laboratory work, M W F 10-12:30, T F 2-4:30. Professor HOPKINS and assistants. Laboratory fee, \$5.

2. **Arthrology.** First term. Credit one hour. This course immediately follows course 1. Professor HOPKINS and assistants.

3. **Myology and Abdominal Viscera.** First term. Credit three hours. In this course the dissection of muscles is begun. Lectures, laboratory hours, etc., the same as in the preceding courses. Professor HOPKINS and assistants.

4. **Myology, Thoracic and Abdominal Viscera, Lymphatic System, and Organs of Special Senses.** Second term. Credit five hours. Lectures and written reviews, Th 10. One or more weekly recitations. Laboratory work, M 9-12, W 2-4:30, S 8-11. Professor HOPKINS, Assistant Professor SUNDERVILLE, and assistants. Laboratory fee, \$5.

5. **Blood Vessels and Nerves of the Arm, Leg, and Head.** Second year, first term. Credit five hours. Laboratory work, M T Th 2-4:30, F and S 9-12. Assistant Professor SUNDERVILLE and assistants. Laboratory fee, \$7.

6. **Central Nervous System and Genital Organs.** Second year, second term. Credit one hour. F 2-4:30. Assistant Professor SUNDERVILLE and assistants.

7. **Surgical Anatomy.** Second term. Hours to be arranged. Topographic anatomy of the dog and the regions of the body most subject to surgical operations will be studied.

Open to those who have completed the required courses in anatomy and to practitioners. Professor HOPKINS and Assistant Professor SUNDERVILLE.

PHYSIOLOGY

Professor, P. A. FISH; Assistant Professor, C. E. HAYDEN; Student Assistant, JESSE SAMPSON.

It is the aim of this department to select from a wide field of important topics those which will be of greatest use to the student in comprehending the vital processes of the animal body. Without a complete understanding of the normal functions, it is useless to attempt progress in the proper conception of diseased conditions.

The proper correlation of work in the laboratory and in the recitation and lecture room, it is believed, will afford to the student a more comprehensive grasp and understanding of the perspective and symmetry of the subject than can be obtained otherwise.

The lectures are illustrated with lantern slides, charts, histological preparations, dissections, and practical demonstrations.

The laboratory is on the second floor of the Veterinary College. It is well lighted and ventilated, and equipped with suitable apparatus. The equipment includes kymographs, induction coils, sphygmographs, cardiographs, circulation schemes, tambours, centrifuges, microscopes, and other apparatus for complete and satisfactory work.

Every encouragement is offered to those properly fitted to pursue their work beyond that given in the regular curriculum.

10. The Physiology of the Nutrition and Secretion of the Domesticated Animals. First year. First term, for veterinary and agricultural students. Credit three hours. M W F 9. Second term, for agricultural students. M W F 10. Professor FISH.

11. Physiology Recitations. Second term. Credit three hours. T Th F 9 or M T 8, Th 10. Professor FISH and Assistant Professor HAYDEN.

12. Physiology Recitations. Second year, first term. Credit two hours. T Th 9; or T Th 8. Professor FISH and Assistant Professor HAYDEN.

13. The Physiology of the Muscular and Nervous Systems. Second year, second term. Credit two hours. M W 10. Assistant Professor HAYDEN.

14. Physiological Laboratory. A portion of the course is devoted to chemical physiology. Artificial digestive juices are tested upon the various kinds of food-stuffs by the students and careful notes kept of the various changes. Milk, bile, and blood are also studied. A portion of the work is devoted to a study of the phenomena associated with the circulatory, respiratory, muscular, and nervous systems. Students are required to obtain and preserve graphic records of these phenomena, whenever possible. Certain experiments requiring special apparatus and special care are performed as demonstrations by the instructors, with the assistance of the students when possible. First term, second year. Credit two hours. Five hours a week. M 11-I, T 10-I, W 11-I and Th 10-I. Professor FISH, Assistant Professor HAYDEN, and Assistant SAMPSON. Laboratory fee, \$7.50.

15. Urine Analysis. Laboratory work devoted to the comparative study of urine. Examinations are made of human urine and that of the domesticated animals, especially the horse. In addition to the chemical examination some attention will be devoted to a microscopic study of urinary deposits. Third year, second term. Credit one hour. Three hours a week. F 10-I; or S 10-I. Professor FISH, Assistant Professor HAYDEN, and Assistant SAMPSON. Laboratory fee, \$4.50.

16. Advanced Physiology. This course will be adapted to the needs of the students and will consist principally of laboratory work supplemented by such reading and reports as may be necessary. Five or more hours a week. Professor FISH, Assistant Professor HAYDEN, and Assistant SAMPSON.

MATERIA MEDICA AND SMALL ANIMAL CLINIC

Professor, H. J. MILKS; Assistant Professor, H. C. STEPHENSON; Assistant, J. D. BENNEHOFF.

The instruction in Materia Medica and Small Animal Clinic consists of lectures, recitations, and laboratory work. The work in pharmacology includes not only the action of medicines but also their preparation and uses. The clinic furnishes abundant material for the study of applied therapeutics and the action of different drugs.

20. Pharmacology. A study of the actions and uses of the various drugs and their preparation. A varied collection of the crude drugs and their official preparations is available. Two lectures or recitations each week. First term, M W 10; second term, T 8, F 9. Professor MILKS. Prerequisites: Chemistry 101, and Veterinary Physiology 10.

21. Materia Medica and Pharmacy Laboratory. The work in this course consists of the study of a selected group of inorganic drugs and of certain crude organic drugs and their official preparations, and in making pharmaceutical preparations such as syrups, emulsions, spirits, liniments, tinctures, fluid extracts,

extracts, ointments, pills, etc. One period will be used for demonstrating the action of the most important drugs. In this study the student is required to write concise notes on the physiologic action of the drugs examined and to make tests of their incompatibility. In addition to this, each student will have practical experience in writing and compounding prescriptions. The importance of a discriminating and accurate system for dispensing medicines is thoroughly emphasized. First term, five hours a week, M 11-1 and T 10-1. Professor MILKS and Dr. STEPHENSON. Laboratory fee, \$7.

22. **Diseases of the Small Animals.** This course deals principally with canine and feline diseases. Two lectures or recitations throughout the second term of the third year. M 9, W 10. Professor MILKS. Prerequisites: General Surgery 30, and Physical Diagnosis 51.

22a. **Diseases of the Small Animals.** Fourth year, second term. W 9, Th 10.

23. **Recitations in Materia Medica and Therapeutics.** Fourth year, first term. T Th 9. Professor MILKS. Prerequisite: Pharmacology 20.

24. **Advanced Work.** This course will consist principally of laboratory exercises on the physiologic action of drugs on animals and will be supplemented by collateral reading and reports. Five or more hours a week. Professor MILKS.

CLINIC FOR SMALL ANIMALS

In this clinic, dogs and cats form the majority of patients. The students have close supervision of the cases; they compound and administer medicines and assist in the surgical operations.

25. **Small Animal Clinic.** Six actual hours a week throughout the third and fourth years. Daily, 2-3 p. m. Professor MILKS, Dr. STEPHENSON, and Dr. BENNEHOFF.

ZOOLOGY

1a. **General Zoology.** Second year, second term. Credit three hours. Assistant Professor YOUNG and Miss MEKEEL. Lecture, Th 10, *McGraw* 5; laboratory T Th 2-4:30, *McGraw* 2b.

A general survey of the animal kingdom with special emphasis on some of the fundamental biological principles. The classification of the larger and economic divisions is included in the course. Laboratory fee, \$4.50.

ANIMAL HUSBANDRY

IN THE COLLEGE OF AGRICULTURE

1 and 2. **Feeding and Breeding.** For students in the Veterinary College. Throughout the third year. Credit, three hours each term. Two lectures and one practicum each week. *Animal Husbandry Building*. First term: lectures, W F 10; practice, W 11. Professor SAVAGE. Second term: lectures, T Th 9; practice, W 11-1. Professor WING and Professor C. E. ALLEN.

The general principles of breeding and feeding domestic animals are taught, with practice in the formulation of rations.

DAIRY INDUSTRY

IN THE COLLEGE OF AGRICULTURE

1. **Milk Composition and Tests.** Fourth year, second term. Credit three hours. Lectures, T Th 11; practice, S 8-10:30. Professor TROY and Assistant Professor MCINERNEY.

The topics considered are secretion and composition of milk, sampling, the lactometer, the Babcock test for fat, acid tests, moisture tests, salt tests, preservative tests, and adulterations. Laboratory fee, \$5.

BOTANY

*1. **General Botany.** Throughout the year. Credit three hours a term; both terms of the course must be completed to obtain credit, unless the student is excused by the department. Professor PETRY, Mr. P. R. BURKHOLDER, the Misses GORDON and JACKSON, and Messrs. ALLEN, ARNOLD, LAUBENGAYER, DE FRANCE,

and others. Lectures, T Th 11. *East Roberts 222*. Laboratory, one period of two and one-half hours. *Stone*. Assignment to sections must be made at the time of registration. Laboratory, S 8-11.

The fundamental facts and principles of plant life. A careful study of form, structure, and reproduction of representatives of the principal groups. Attention will be given to life processes, particularly in the higher plants. Laboratory fee, \$3.50 a term.

3. **Poisonous Plants.** Second term. Credit two hours. Lecture, T 10. Laboratory, T 2-4:30. *Stone, Botanical Laboratory*. Assistant Professor MUENSCHER and Mr. ABBE.

This course is designed primarily for veterinary students. Special emphasis is placed on the identification, poisonous properties, and distribution of stock poisoning plants. Fee, \$2.

SURGERY

Professor, J. N. FROST; Instructor, J. MAURER.

The instruction consists of classroom and laboratory work designed to afford symmetrical training for practice.

THE CLASSROOM WORK

Course 30 in General Surgery, Course 40 in General Pathology, and Course 31 in Surgical Exercises together constitute a group designed to impart a general knowledge of the principles of surgery, surgical pathology and therapeutics, and operative technique.

Course 32, a total of eighty lectures and recitations, is devoted to the surgery of the various regions of the body.

The College possesses an extensive collection of surgical instruments and apparatus of home and foreign make, illustrating the history of veterinary surgery as indicated by the means employed in the cure of diseases. The College has acquired since its foundation an extensive pathological collection illustrative of surgical diseases, to which has been added from the surgical and obstetrical clinics a large amount of material of value for teaching purposes. Further important additions are made by veterinary practitioners. The surgical collection is especially rich in specimens illustrating the diseases of the teeth.

CLINICS AND LABORATORY WORK

The laboratory work in the Department of Surgery includes Surgical Exercises and Clinics. The course in surgical exercises comprises sixteen periods of three hours each, in which the student is required to perform all the important operations on horses and cattle. The animal for a given exercise is placed under general anaesthesia, which is maintained until the close of the period, when the subject is destroyed. The maintenance of chloroform anaesthesia for three consecutive hours gives to the student valuable experience in the technique of general anaesthesia, for which there is a constantly increasing demand. Strict method is enforced in relation to asepsis and antisepsis, arrest of hemorrhage, suturing, and dressing, so that, while acquiring skill and a knowledge of the appearance, resistance, and general character of living tissues, the student also forms proper habits in surgical procedure.

CLINICAL SURGERY OF THE LARGER ANIMALS

M W F, first and second terms. One year. Students in charge of cases are required to give necessary daily attention.

The surgical building has a thoroughly modern equipment in every respect. There is a spacious operating room fitted with operating table, stocks, and other conveniences, a commodious recovery room for chloroformed animals, and other accessory rooms for instruments, drugs, and other necessities. The entire structure is planned to secure the highest efficiency in aseptic and antiseptic surgery. Senior students assist regularly in the surgical operations.

General and local anaesthetics are regularly used in painful operations, and the student is taught to eliminate as far as practicable, the element of pain in surgery. Instruments and apparatus of the most approved pattern are kept directly at hand in the operating room, and the student becomes familiar with their good and bad points by actual use.

Special apparatus for investigation is supplied as needed. Advanced students are called upon to assist in the various investigations, and thus become not only more familiar with surgical manipulations but also inspired to study methodically and effectively the many questions in surgical pathology and therapeutics. They also become better prepared to cope promptly and properly with the many atypical cases constantly occurring in general practice.

30. General Surgery. Second year, second term. Four recitations or laboratory periods a week. T Th 9, F 8, Th or S 11-1. Professor FROST. Prerequisite courses are 1, 2, and 3 in Anatomy, Course 10 in Physiology, Course 6 in Histology.

31. Surgical Exercises. Three hours a week of laboratory work in surgical operations upon anaesthetized animals. Third year, first term. T 10-1, or Th 10-1. Professor FROST and Dr. MAURER. Laboratory fee, \$20.

32. Special Surgery. Third year, first term. Five lectures or recitations a week. M T W Th F 9. Professor FROST.

33. Surgical Clinic. Six actual hours or more a week throughout the fourth year. M W F 10-12, first and second terms. Professor FROST and Dr. MAURER. Prerequisite courses are 30 and 31.

34. Consulting Clinic. Six actual hours a week for four terms. Daily at 2 p. m. Professor FROST and Dr. MAURER.

35. Jurisprudence, Ethics, and Business Methods. One lecture a week. Fourth year, second term. F 9. This course is given chiefly by members of the legal and medical professions and by non-resident veterinarians.

COMPARATIVE PATHOLOGY; BACTERIOLOGY; MEAT INSPECTION

Professors, V. A. MOORE and W. A. HAGAN; Assistant Professors, C. M. CARPENTER, PETER OLAFSON, J. M. HENDRICKSON and E. L. BRUNETT; Instructors, A. ZEISSIG, WILLIAM CASLICK and A. TRAYFORD; Student Assistants, C. J. PARSHALL and W. A. KELLY.

Instruction is given by lectures, recitations, and laboratory work. The laboratory work in pathology comprises the gross and microscopic examination of morbid tissues, and autopsy work upon all of the domestic animals. Opportunity is offered for more extended work in pathological histology and technic, for which purposes the laboratory is very well equipped.

The bacteriological laboratories are well equipped with modern apparatus. The students are instructed in the technic necessary for a practical working knowledge of bacteriology. The more important bacteria pathogenic for animals are studied and methods of laboratory diagnosis receive careful attention. The reactions of tissues to pathogenic organisms are considered in the work in immunity. The various biological reactions of importance in diagnosis and the important biological products used in diagnosis and treatment are given special attention.

For those who wish to do advanced work in any of these subjects excellent facilities are afforded. As the college is constantly investigating outbreaks of disease among animals in the State, an abundance of working material is assured. This enables the student to come into touch with practical work in bacteriological diagnoses.

It is the aim of the department to drill the students, by means of actual work, in the technic necessary for them to apply successfully in their future professional duties the knowledge acquired in the study of pathology and bacteriology. To this end the courses of instruction have been carefully arranged, and for this purpose the laboratories have been equipped.

A seminary for graduate and advanced students in the department is held each week on a day to be arranged. The attendance of graduate students is required.

40. **General Pathology.** Second year, second term. Credit two hours. Normal histology and one year's work in anatomy and physiology are recommended. Recitations, M 9, W 8. Dr. OLAFSON.

40a. **General Pathology Laboratory.** Two hours. Prerequisite normal histology. Course 40 must be taken simultaneously. Section I, W 11-1, F 10-1; Section II, T 10-1, Th 11-1. Dr. OLAFSON. Laboratory fee, \$4.

41. **Special Pathology.** Third year, first term. Credit two hours. Prerequisite course 40. Lectures, M F 8. Dr. OLAFSON.

41a. **Special Pathology Laboratory.** Third year, first term. Credit two hours. Open to students who have taken or are taking Course 41. Section I, T 10-1, S 8-10:30. Dr. OLAFSON. Laboratory fee, \$4.

42. **Pathology of Infectious Diseases.** Fourth year, first term. Credit two hours. Open to students who have taken 40 and 41, and have taken or are taking 43. Recitations, M W 12. Dr. MOORE.

43. **General Bacteriology.** Second year, first term. Credit two hours. Lecture and recitation. W F 8. Dr. HAGAN.

43a. **General Bacteriology Laboratory.** First term. Credit two hours. Open to students who have taken or are taking Course 6 in microscopy or its equivalent and Course 43 or its equivalent. Students outside of the college should first apply to the department before registering. Section II, M 8-10, Th 10-1. (Section I,) W 11-1, F 9-12. Section III, T 2-4:30, Th 2-4:30. (This section is not included in the veterinary schedule; it is intended for students outside the college.) Dr. HAGAN. Laboratory fee, \$10.

44. **Parasites.** Third year, first term. Credit two hours. Lecture, F 11; recitation, W 8. Dr. CARPENTER.

44a. **Parasites Laboratory.** One hour. Section I, M 10-1; Section II, S 8-10:30. Dr. CARPENTER. Laboratory fee, \$2.

45. **Hematology.** Optional. One hour. Second term. Hours by arrangement. Dr. OLAFSON. Laboratory fee, \$2.

45b. **Laboratory Methods of Diagnosis.** Prerequisite courses 40 and 43. Instruction in the application of methods used in histopathology and bacteriology for the diagnosis of diseases. Hours by appointment. Dr. CARPENTER.

45c. **Seminar.** First and second terms. Hours to be arranged. Credit one hour. Required of all graduate students.

46. **Diseases of Poultry.** Fourth year, second term. Credit two hours. Prerequisite courses 40 and 43. T 10, W 8. Dr. BRUNETT.

47. **Autopsies.** Throughout the junior and senior years. Credit one hour, second term, in senior year. Dr. OLAFSON.

48. **Meat and Dairy Inspection.** Fourth year, second term. Credit one hour. Lecture, Th 9. Dr. MOORE.

49. **Pathogenic Bacteriology and Immunity.** Third year, second term. Credit two hours. Prerequisite courses 43 and 43a, or their equivalent. Lectures, W F 9. Dr. HAGAN.

49a. **Pathogenic Bacteriology Laboratory.** Third year, second term. Credit three hours. Prerequisites, General Bacteriology, General Pathology, also students must have had or simultaneously take Course 49. T 10-1, Th 10-1, S 8-10. Dr. HAGAN. Laboratory fee, \$10.

49b. **Pathogenic Bacteriology Laboratory.** Credit, two hours. Prerequisite, General Bacteriology. Students must also have had or take simultaneously, Course 49. (This course is intended for students outside the veterinary college.) M 11-1, F 10-1. Dr. ZEISSIG. Laboratory fee, \$10.

VETERINARY MEDICINE AND OBSTETRICS

Professor, D. H. UDALL; Assistant Professors, M. G. FINCHER and H. ASMUS; Instructor, W. J. GIBBONS.

The course in veterinary medicine, principles and practice, extends over the last two years of undergraduate study, the subjects of the second year being distinct from, and complementary to, those of the first. It includes the consti-

tutional dietetic and toxic affections and the non-infectious maladies of the different systems of organs—digestive, respiratory, circulatory, urinary, cutaneous, and visual—of the various genera of domestic animals. The wide scope of the course, covering as it does the varied manifestations of a given morbid condition, the complications in each, caused by constitution, environment, utilization, microbial infection, etc., and the application of prophylactic and therapeutic measures to all in turn, give a breadth and soundness of view which should render the student a reliable and skillful veterinary pathologist, physician, and sanitarian.

The course on contagious diseases deals with the general subject of infection and contagion; the microbiology of diseases in which micro-organisms constitute the essential factor; the accessory and restrictive environment, such as condition of soil, water, air, climate, culture, season, weather, animal industries, trade, migration, war, consumption of animal food, etc.; the diagnosis of the different plagues; the various methods of suppression by the individual owner, the municipality, town, county, state, or nation; and the exclusion of pestilences from a country. The transmissibility of each contagious disease to different genera of animals, from animal to man, and from man to animal, together with the susceptibility of each genus to immunization and the best known means of securing this, receive due attention.

Enzoötic diseases are carefully studied, and the various causative factors in location, environment, and in constitutional or racial susceptibility are fully dealt with, as subsidiary to prevention and treatment.

Our proximity to the city and to a well-stocked agricultural country tends to secure a greater variety of patients than can be had in a large city remote from country flocks and herds. Students take charge of individual cases in the hospital and ambulatory clinic and keep a record of each with treatment. The course also includes instruction in diagnosis. Through the medium of laboratory guides students are expected to acquire a methodical system of examination by repeated systematic observations on both normal and diseased animals. The work involves the use of various special diagnostic methods taught in other laboratories of the College, such as examination of the blood, urine, and feces, the application of sero-diagnostic methods, etc.

AMBULATORY CLINIC

An ambulatory clinic or out-clinic is conducted for the purpose of giving instruction to students under conditions identical with those encountered in private practice. Proper conveyances and equipment are provided and an opportunity offered for observing such diseased farm and dairy animals as cannot be entered in the clinics of the College. The student thereby not only has an opportunity to see cases not readily brought to the college clinic, but also assists in handling cases in the same manner and under the same environment as is required of the country practitioner. As the vicinity of Ithaca is largely devoted to dairying, valuable clinical material relating to obstetrics and the diseases of dairy cows is available and is extensively used.

50. Veterinary Medicine, Principles and Practice. Lectures or recitations. Third year. First term, T Th 8; second term, M W F 8.

50a. Veterinary Medicine, Principles and Practice. Fourth year. First term, M W F 8; second term, T Th 8.

51. Physical Diagnosis. Two recitations or lectures a week. Second year, second term. Credit two hours. W Th 8.

52. Horseshoeing. Lecture and laboratory. Fourth year. Open to seniors. First term, T 10–12, or Th 10–12; second term, M 8–10. Assistant Professor ASMUS.

53. Ambulatory Clinic. Throughout the senior year. Credit two hours each term. One hour a week is devoted to a review and discussion of the cases treated in the clinic. Recitations, first term, F 9; second term, T 9.

54. Obstetrics, including Diseases of the Genital Organs of Cattle, Sterility, Abortion. Four lectures or recitations a week in the first term of the fourth year. M W 9, T Th 8. It is aimed in this course to give a general survey of the subject

of obstetrics, and to include a thorough consideration of the diseases of the genital organs, including sterility and abortion. Obstetric exercises are given by appointment throughout the year. For this work a specially constructed apparatus or "phantom" is employed in such a manner as to closely simulate actual working conditions in obstetrical practice. Newborn calves are procured, killed, and so placed in the apparatus that the various corrections of position and embryotomic operations may be carried out by the student under the direction of the instructor in charge.

Clinical instruction in obstetrics is given in Course 53.

55. **Ophthalmology.** One lecture or recitation a week, third year, second term. T 8.

56. **Hygiene.** One lecture or recitation a week, fourth year, second term. F 8.

Special Lectures. During the year, lectures on special topics in medicine will be given by eminent practitioners and teachers of veterinary medicine. These will form a part of the instruction in this department.

Opportunities for Research. The activities of the department, aside from the instruction work, are devoted to research in connection with diseases of cattle, including the phenomena of sterility and abortion in animals of breeding age, and of diseases of newborn calves having intimate relation to the diseases of the genital organs of cows. Opportunity is afforded for participation in the investigations by graduate students having acceptable preparation.

MILITARY SCIENCE AND TACTICS; PHYSICAL TRAINING

All men in the first two years of undergraduate courses, except aliens and those who are physically disqualified, as well as those holding a baccalaureate degree of an approved college, must take, in addition to the scholastic requirements for the degree, three hours a week in the Department of Military Science and Tactics.

All women in the first two years of undergraduate courses and all men of those two classes, named above, who are excused from military drill must take, in addition to the scholastic requirements for the degree, three hours a week in the Department of Physical Training.

The instruction is divided into two courses, the basic and the advanced. The basic course is given in the first and second years and requires three hours a week. The work for the most part is given by the Infantry Unit. Of a total of 90 hours of basic work in each year, 30 hours is given by the officer in charge of the Veterinary Unit. The advanced course is given in the third and fourth years and requires attendance of one hour a week during the academic year. Following is an outline of the work of the four years:

First Year. Drill in the school of the soldier, in the school of the squad, the platoon, the company and battalion, in ceremonies and in marching; care and handling of arms and equipment; small arms firing; interior guard duty; minor tactics; morale; physical training; organization and mission of the R. O. T. C.; military policy of the United States; military organization which includes military forces of the United States; administrative and tactical organization of the United States Army and organization of the Medical Department; history of military medicine; military administration which includes commissioned and enlisted personnel; customs and courtesies of the service; discipline and leadership; military law; military hygiene and first aid.

Second Year. Organization; military courtesy and discipline; drill; care and handling of equipment; small arms firing; interior guard duty; minor tactics; morale; physical training; topography and map reading; signalling; organization of the theatre of war; tactics of the separate arms and employment of combined arms; tactical employment of medical units; hospitalization and sanitation; medical supply.

Third Year. Public animals; prevention and control of disease; remount depots; animal management; meat and dairy hygiene; sanitation.

Fourth year. Hospitals and hospitalization; veterinary sanitary regulations; care of animals on the march and in the field; miscellaneous medico-military subjects.

Students cannot be admitted to the advanced course until they have completed the basic course, but students who have satisfactorily completed the basic course in any line unit will receive credit for it upon presenting satisfactory evidence in the form of a certificate and may be admitted directly to the advanced course, at the termination of the sophomore year, providing their military work has been in sequence; that is, that there is no lapse between the time the student completes the basic course and the beginning of the advanced course. However if a student completes his two years of basic work and then leaves College for a year or more, on his return, if he so elects, he may sign a contract to pursue the advanced course.

Students in the basic course receive no pay or allowances, but students in the advanced course receive commutation of subsistence at the per diem rate annually prescribed by the Secretary of War.

In addition to the work outlined above, each student in the advanced course is required to attend one Veterinary R. O. T. C. camp during his course. This camp is now held at Carlisle Barracks, Pa. It begins as early in the summer as possible after the closing of the veterinary schools and lasts for six weeks. At camp the tactical and field duties of veterinary service are emphasized and demonstrated. Each student receives his expenses to and from camp, and pay at the rate of \$21 a month for the time spent there, thus getting a vacation which is pleasant and profitable.

While the special work of this department is of necessity military in its nature, it is also professional. A large part of the work will be found to be applicable to civil practice, so the graduate who may never be called to active duty will find value in the time given to the training.

The object of this training is to prepare prospective Veterinarians for the duties of Junior Officers in the Veterinary Corps of the various components of the United States Army. All men who complete the course satisfactorily are commissioned in the Veterinary Officers Reserve Corps. Vacancies in the Regular Army, when they occur, are filled by successful applicants of the Officers Reserve Corps. It is obvious that those Veterinarians who have completed successfully the R. O. T. C. advanced course and who are seeking a commission in the Regular Army would be better qualified than those who have not had such training.

HYGIENE AND PREVENTIVE MEDICINE

All students in the first year of undergraduate courses are required to attend lectures on Hygiene and Preventive Medicine given once a week throughout the college year.

1. **Hygiene (Required of all Freshmen).** First term. One lecture recitation each week with preliminary examination and final. The use of a textbook is required.

Registration and assignment to section: *for men*, at the Old Armory; *for women* at the Sage Gymnasium.

Sections for men: Monday 9, 10, 11, or 12; Tuesday 9, 11, or 12; Wednesday 8, 9, 10, 11, or 12; Thursday 8, 9, 11, or 12; Friday 8 or 11; Saturday 8, 9, 10, or 12.

Sections for women: Monday 8; Tuesday 8 or 10; Thursday 10 or 12; Friday 9 or 2; Saturday 11.

2. **Hygiene (Required of all Freshmen).** Second term. One lecture recitation each week with preliminary examination and final. The use of a textbook is required.

Registration and assignment to section: *for men*, at the Old Armory; *for women*, at the Sage Gymnasium.

Sections for men: Monday 9, 11, or 12; Tuesday 9, 11, or 12; Wednesday 8, 9, 11, or 12; Thursday 9, 11, or 12; Friday 8 or 11; Saturday 8, 9, 10, or 12.

Sections for women: Monday 8; Tuesday 8 or 10; Thursday 10 or 2; Friday 9 or 2; Saturday 11.

APPENDIX A

OPENINGS FOR VETERINARIANS IN AMERICA

1. In the Medical Department of the United States Army there is a demand for a limited number of veterinarians. Beginning with the rank of Second Lieutenant, the veterinarian earns promotion after certain periods of service and examination. The initial salary is \$1,700 and quarters.

2. In the Bureau of Animal Industry, United States Department of Agriculture, a number of veterinarians are employed professionally as livestock agents and inspectors, inspectors and superintendents of quarantine stations, and investigators in bacteriology and pathology. By an Act of Congress, the federal veterinary inspectors must be graduates of a veterinary college maintaining the requirements of the Bureau. Applicants for the position must take a civil service examination. The initial salary is \$1,860.

3. In the different States there are appointive positions as State Veterinarian, and in some States as County or District Veterinarian. These are desirable positions and involve considerable responsibility.

4. The time is not far distant when each municipality must have its veterinary inspector of markets, abattoirs, and butcher meat, as well as of milk and other dairy products.

5. Veterinarians are needed to serve on tuberculosis and other commissions, in order that the work in this field may be conducted intelligently and successfully along scientific lines. The control of disease depends largely upon those specially trained in the anatomy, physiology, hygiene, and pathology of the lower animals.

6. Educators in comparative pathology are wanted in agricultural and veterinary colleges, and experiment stations, and must soon be in demand by every medical college that aims to keep abreast of the times.

7. There are always openings in the wide field of private veterinary practice. With a ratio of three farm animals to every human being, and with less than one veterinarian to every thirteen doctors of medicine for man, the balance of opportunity seems to be largely in favor of the veterinary practice, and this preponderance must steadily increase with the recovery of stock values and the increase in the number of farm animals.

APPENDIX B

LEGAL REQUIREMENTS FOR LICENSE TO PRACTICE VETERINARY

MEDICINE AND SURGERY IN THE STATE OF NEW YORK

PUBLIC HEALTH LAW

CONSOLIDATED LAWS OF NEW YORK, CHAPTER 45, ARTICLE 10

§211. *Qualifications for practice.* No person shall practice veterinary medicine after July first, eighteen hundred and ninety-five, unless previously registered and legally authorized, unless licensed by the regents and registered as required by this article; nor shall any person practice veterinary medicine who has ever been convicted of a felony by any court, or whose authority to practice is suspended or revoked by the regents on recommendation of the state board. Any person, a citizen of the United States and of the state of New York, who matriculated in a reputable veterinary medical school prior to January first, eighteen hundred and ninety-five, and who received his degree therefrom prior to January first, eighteen hundred and ninety-seven, or any person who has engaged in the practice of veterinary medicine prior to the year eighteen hundred and eighty-six, shall be admitted to the veterinary examination for license to practice, as conducted by the regents of the university of the state of New York.

§216. *Admission to examination.* The regents shall admit to examination any candidate who pays a fee of ten dollars and submits satisfactory evidence, verified by oath if required, that he (first) is more than twenty-one years of age;

(second) is of good, moral character; (third) has the general education required in all cases after July first, eighteen hundred and ninety-seven, preliminary to receiving a degree in veterinary medicine; (fourth) has studied veterinary medicine not less than four full years, including four satisfactory courses in four different academic years, in a veterinary medical school registered as maintaining at the time a satisfactory standard; (fifth) has received a degree as veterinarian from some registered veterinary medical school. The degree in veterinary medicine shall not be conferred in this state before the candidate has filed with the institution conferring it, the certificate of the regents that before beginning the first annual veterinary course counted toward the degree he had earned a veterinary medical student qualifying certificate in accordance with the rules of the regents, the minimum requirement for which, for matriculates after January one, nineteen hundred and five, shall be the successful completion of an approved four-year high school course or its equivalent. The regents may, in their discretion, accept as the equivalent for any part of the third and fourth requirement, evidence of five or more years' reputable practice in veterinary medicine, provided that such substitution be specified in the license. The regents may also, in their discretion, admit to the examination graduates of duly incorporated veterinary schools, who matriculated in such schools prior to nineteen hundred and twelve, provided such graduates are now and have been for at least five years, residents of this state.

§218. *Examinations and reports.* Examination for license shall be given in at least four convenient places in this state and not less than twice annually, in accordance with the regents' rules, and shall be exclusively in writing and in English. Each examination shall be conducted by a regents' examiner, who shall not be one of the veterinary medical examiners. At the close of each examination, the regents' examiner in charge shall deliver the questions and answer papers to the board, or to its duly authorized committee, and such board, without unnecessary delay, shall examine and mark the answers and transmit to the regents an official report, signed by its president and secretary, stating the standing of each candidate in each branch, his general average and whether the board recommends that a license be granted. Such report shall include the questions and answers and shall be filed in the public records of the university. If a candidate fails in his first examination, he may have a second examination without fee.

§219. *Licenses.* On receiving from the state board an official report that an applicant has successfully passed the examination and is recommended for license, the regents shall issue to him, if in their judgment he is duly qualified therefor, a license to practice veterinary medicine. Every license shall be issued by the university under seal and shall be signed by each acting veterinary medical examiner of the board and by the officer of the university who approved the credential which admitted the candidate to examination, and shall state that the licensee has given satisfactory evidence of fitness as to age, character, preliminary and veterinary medical education and all other matters required by law, and that after full examination he has been found duly qualified to practise. Applicants examined and licensed before July first, eighteen hundred and ninety-seven, by other state examining boards registered by the regents as maintaining standards not lower than those provided by this article, and applicants who matriculated in a New York state veterinary medical school before July first, eighteen hundred and ninety-six, and who received the veterinarian degree from a registered veterinary medical school before July first, eighteen hundred and ninety-seven, may without further examination, on payment of ten dollars to the regents, and on submitting such evidence as they may require, receive from them an endorsement of their licenses or diplomas conferring all rights and privileges of a regents' license issued after examination. And any veterinary practitioner in any county of this state who was registered in the county clerk's office between July first, eighteen hundred and ninety-five, and July first, nineteen hundred and fifteen, or any commissioned veterinary medical officer heretofore serving in the United States army or an allied army in the world war, or so commissioned and honorably discharged therefrom, and who was a citizen and resident of this state at the time of entering

such service or at the time this section as hereby amended takes effect, or becomes a resident within one year thereafter, may, upon satisfactory evidence of such registration or discharge and of qualification to practise either with or without examination as the board of regents may direct on the recommendation of the board of veterinary medical examiners, and upon written application, receive from the board of regents a certificate of facts which may be registered in the office of the county clerk where such practitioner was registered, or where such discharged commissioned officer intends to practice, and the registration of such certificate shall constitute a lawful registration under the provisions of this article and shall operate to confer all the rights and privileges of a regents' license issued after examination. Before any license is issued it shall be numbered and recorded in a book kept in the regents' office and its number shall be noted in the license. This record shall be open to public inspection, and in all legal proceedings shall have the same weight as evidence that is given to a record of conveyance of land.

§220. *Registry.* Every license to practise veterinary medicine shall, before the licensee begins practice thereunder, be registered in a book to be known as the "Veterinary Medical Register," which shall be provided by and kept in the clerk's office of the county where such practice is to be carried on, with name, residence, place and date of birth, and source, number, and date of his license to practice. Before registering, each licensee shall file, to be kept in a bound volume in the county clerk's office, an affidavit of the above facts, and also that he is the person named in such license, and had, before receiving the same, complied with all requisites as to attendance, terms, and amount of study and examination required by law and the rules of the university as preliminary to the conferment thereof, and no money was paid for such license, except the regular fees, paid by all applicants therefor; that no fraud, misrepresentation, or mistake in any material regard was employed by any one or incurred in order that such license should be conferred, and shall annually in the month of January report, under oath, to the state board of examiners, any facts required by the board, shall pay to the regents a registration fee of one dollar, and shall receive a certificate of registration that must be conspicuously displayed together with the original certificate of registration. Every license, or if lost, a copy thereof, legally certified so as to be admissible as evidence, or a duly attested transcript of the record of its conferment, shall, before registering, be exhibited to the county clerk, who, only in case it was issued or indorsed as a license under seal by the regents, shall indorse or stamp on it the date and his name preceded by the words, "Registered as authority to practice veterinary medicine, in the clerk's office of county." The clerk shall thereupon give to every veterinarian so registered a transcript of the entries in the register, with a certificate under seal that he has filed the prescribed affidavit. The licensee shall pay to the county clerk a total fee of one dollar for registration, affidavit and certificate.

CATALOGUE OF STUDENTS

1927-28

GRADUATE STUDENTS

Caslick, William, *Ithaca*.
Derrick, George W., *Syracuse*.
Dowd, Gerald R., *San Francisco, Cal.*

Gibbons, Walter Joseph, *Ithaca*.
Grace, Reginald Linus, *Morristown*.
Zeissig, Alexander, *New York City*.

SENIORS, CLASS OF 1928

Goubeaud, Charles Joseph, *Flushing*.
Greenway, John Ernest, *Syracuse*.
Hilbert, Kenneth Franklin, *Candor*.
Hopson, Henry George, *Massena*.
Kelly, Wayne Arthur, *Lysander*.
Lee, Myrle Fober, *Lynbrook*.
McIntosh, John Pierce, *Norway*.
MacKellar, Robert Stuart, *New York City*.

Messer, Lykergus William, *Trumansburg*.
Nichols, Rudolph Edward, *Chatham*.
Noonan, Cyril James, *Honeoye Falls*.
Parshall, Charles Jonas, *Colome, S. D.*
Poley, Phillip, *New York City*.
Tully, Homer Gilbert, *New York City*.
Ulmer, William Ernest, *Chappaqua*.

JUNIORS, CLASS OF 1929

Asmus, Johanna B., *Ithaca*.
Baker, Donald W., *Trenton, N. J.*
Bircher, Irwin George, *Rochester*.
Bouton, Alton P., *Cortland*.
Cangi, Guerino W., *Buffalo*.
Dwight, Ward T., *South Otselic*.
Ellison, Ralph T., *Corning*.
Fortune, Leo Anthony, *Gouverneur*.
Gibbons, James L., *Ithaca*.
Gow, Alexander, *Ransomville*.
Graziadei, Francisco S., *Utica*.
Greenman, Francis C., *Binghamton*.
Hall, Calvin E., *Dansville*.

Johnson, Samuel A., *South New Berlin*.
Johnson, Seth D., *South New Berlin*.
Kautz, Henry, *Ithaca*.
McConnell, George E., *New York City*.
McCrank, Peter N., *Plattsburgh*.
Mouat, Hugh R., *Lansing, Ill.*
Peck, Edwin D., *Waterville*.
Stafford, Glen D., *Cortland*.
Temple, Harry C., *Gouverneur*.
Thomas, Joseph Albert, *Red Hook*.
Woodworth, Lemuel W., *East Jewett*.
Wynn, William W., *Bridgeton, N. J.*

SOPHOMORES, CLASS OF 1930

Armstrong, David Earle, *West Winfield*.
Barrett, John Henry, *Norwich, Conn.*
Baxter, Ernest Cecil, *Penn Yan*.
Bloom, Frank, *New York City*.
Breivis, John James, *Binghamton*.
Caslick, Frederick George, *Newfield*.
Clark, Harold Chapin, *Ithaca*.
Doran, Paul John, *Cobleskill*.
Eldred, Arthur Charles, *Bombay*.
Errington, Burnard James, *Lackawanna*.
Field, Lincoln Elmer, *Mount Vision*.
Guthrie, Richard Sidney, *Greenwich*.

Hopkins, David, *Brockton, Mass.*
Joslyn, Clair Owen, *Akron*.
Keller, William George, *Ithaca*.
Legg, Asa Frank, *South Otselic*.
Maginnis, Ernest V., *Ithaca*.
Marvin, John Gibson, *Almond*.
Milks, Clifford Howard, *Ithaca*.
Sampson, Jesse, *Leland, Ill.*
Schantz, Lansing C., *Lowville*.
Sternfels, Mark, *Brooklyn*.
Tyler, Leonard Lewis, *Hammondsport*.
Vangura, Vincent Paul, *Clinton*.
Weitz, William Leonard, *Kenmore*.
Wohnsiedler, George, *New York City*.

FRESHMEN, CLASS OF 1931

Bates, Abraham, *Ithaca*.
Beers, Alfred Montgomery, *Binghamton*.
Cairns, Frederick Courtney, *St. Johnsville*.
Cameron, Hugh Stuart, *New York City*.

Chatfield, Clayton Calkins, *Union*.
Compton, Lyle S., *Friendship*.
Crandall, James Clifford, *Stillwater*.
Crane, Douglas Belden, *Mt. Kisco*.
Dansky, Simon Paul, *Hudson*.
Fischer, Sebastian Benedict, *East Northport*.

- Fletcher, Charles Edward, *New York City*.
 Fredericks, Arthur William, *Northport*.
 Gifford, Ralph William, *Randolph, Vt.*
 Gingras, George Edward, *Gouverneur*.
 Goers, Theodore Walter, *Milwaukee, Wis.*
 Hansen, Harry Edward, *Hagaman*.
 Hoeftle, Charles Henry, *Ithaca*.
 Hollenbeck, David, *Candor*.
 Jennings, William Edwin, *Cohoes*.
 Johanson, Fred Ossian, *Newfield*.
 Kaley, Grant Samuel, *Gouverneur*.
 Kleinfeld, Abraham, *Weehawken, N. J.*
 Klussendorf, Raymond Clarence, *Hammond*.
 Knapp, John William, *Roselle Park, N. J.*
 Lange, Chester Jay, *Ithaca*.
 Marvin, Paul Dana, *Almond*.
 Minster, John Carlton, *Caledonia*.
 Moulthrop, Irwin Morrison, *Ithaca*.
 Overacker, Douglas MacKean, *Gouverneur*.
 Raebone, Alexander Loudon, *New York City*.
 Roylance, John Gunter, *Englewood, N. J.*
 Sachs, Lloyd Herman, *Mill River, Mass.*
 Shaw, William Sumner, *Springvale, Me.*
 Snelling, Albert Minor, *Athens, Ga.*
 Strang, George Jacob, *Akron*.
 Suydam, Benjamin Webster, Jr., *Syracuse*.
 Todd, Quinton Leach, *Mexico*.
 Van Alstyne, James Edward, Jr., *Kinderhook*.
 Vigdarowitz, Martin, *New York City*.
 Waitz, Lawrence Fobias, *Jamaica*.
 Wegmann, Charles Edward, *Yonkers*.
 Wernicoff, Nathan, *Brooklyn*.
 Woelffer, Elmer August, *Watertown, Wis.*
 Wohnsiedler, Herbert, *New York City*

PRACTITIONERS' COURSE

- Maurer, Julius, *Zurich, Switzerland*. Van Alstyne, William C., *Wolcott*.

SUMMARY

Graduate students, 6; seniors, 15; juniors, 25; sophomores, 26; freshman, 44; total, 116.